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2 **Listing of the Claims**

3 **In the Claims:**

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5 1. (Original) A method for scheduling appointments to do a job, comprising the steps of:
6 (a) enabling an operator to specify each service and a time dependency of each
7 service needed to perform the job;
8 (b) enabling an operator to specify a time availability of each resource that can be
9 used to perform each service needed to perform the job;
10 (c) automatically creating a plurality of proposals that specify when the job might
11 be scheduled during a defined time period, as a function of each service and the time dependency of
12 each service specified and as a function of the time availability of each resource that can be used to
13 perform each service needed to perform the job, each proposal indicating a time instance at which the
14 job can be initiated during the defined time period;
15 (d) based upon a desired time for starting the job, automatically selecting one of
16 the plurality of proposals that was created, to make an appointment for doing the job; and
17 (e) automatically revising the plurality of proposals in response to said one of the
18 plurality of proposals being selected, to accommodate changes in the time availability of resources
19 that are required to perform said one of the plurality of proposals that was selected, in regard to
20 proposals that have not yet been selected.
21 2. (Original) The method of Claim 1, further comprising the step of associating the proposal
22 with a customer for whom the job is to be done.
23 3. (Original) The method of Claim 1, wherein the step of automatically creating the plurality of
24 proposals comprises the steps of automatically searching each of the services needed to perform the job to
25 identify an availability of each block of time that is:
26 (a) sufficient in duration to perform the service; and
27 (b) for which resources required to perform the service are available.
28 4. (Original) The method of Claim 3, further comprising the step of associating a job
29 identification with each block of time that is thus identified.
30 5. (Original) The method of Claim 3, further comprising the step of splitting a block of time
into pieces, to define a proposal having a split time interval in which the job can be performed.
6. (Original) The method of Claim 1, further comprising the step of assigning different
priorities to at least some of the resources, so that a resource assigned a lower priority is used prior to
a resource assigned a higher priority, when selecting said one of the plurality of proposals to schedule
the appointment.

1 7. (Original) The method of Claim 1, wherein the step of specifying the time availability of
2 each resource includes the step of specifying any block of time in which a resource is unavailable to
3 perform a service during the defined time period.

4 8. (Original) The method of Claim 1, wherein the step of selecting one of the plurality of
5 proposals comprises the step of balancing usage of the resources that can be used to perform the
6 services needed to perform the job.

7 9. (Original) The method of Claim 1, wherein a plurality of the services needed to perform
8 the job are carried out sequentially, with a first service being completed before a second service can
9 be begin.

10 10. (Original) The method of Claim 1, wherein a plurality of the services needed to perform
11 the job are carried out in parallel, with a first service being completed while a second service is also
12 being done.

13 11. (Original) The method of Claim 1, wherein the step of automatically creating the
14 plurality of proposals is completed substantially before the step of automatically selecting is carried
15 out.

16 12. (Original) The method of Claim 1, further comprising the step of repeating steps (a)
17 through (b) for each of a plurality of additional jobs, to enable scheduling of appointments to the
18 additional jobs.

19 13. (Original) The method of Claim 1, further comprising the step of enabling an
20 appointment to be canceled, and in response thereto, automatically revising the plurality of proposals,
21 to accommodate changes in the time availability of resources that were previously required to
22 perform said one of the plurality of proposals corresponding to the appointment that was canceled,
23 making the resources available for other appointments.

24 14. (Original) A method for automating scheduling of a plurality of jobs, comprising the
25 steps of:

- 26 (a) associating a job identification with each of the plurality of jobs;
- 27 (b) determining all jobs that can be performed during a defined work period;
- 28 (c) for each job that can be performed during the defined work period,
29 automatically determining each time instance in which the job can be performed;
- 30 (d) automatically determining each service required to perform each job;
- (e) automatically identifying resources that can carry out each service required to
perform each job;
- (f) for each resource identified that can perform a service required to do each job,
automatically determining time blocks in which the resource is available for the time required to
perform the service, and associating the time blocks thus determined with the job identification for
the job in which the service is required to form a plurality of schedule paths;

1 (g) retaining data specifying all time blocks associated with each job
2 identification, and start times for each job within the time blocks; and

3 (h) enabling appointments to be made to have desired jobs done, by automatically
4 searching the data to locate specific time criteria for the desired jobs, said data being modified in
5 response to each appointment that is made, to identify time blocks that are no longer available for
6 doing a job.

7 15. (Original) The method of Claim 14, further comprising the step of ranking the time
8 blocks associated with each job in the data, to achieve one of:

9 (a) a ranked priority in the use of resources; and

10 (b) a balancing of the resources that are used for the services required to do the
11 jobs.

12 16. (Original) The method of Claim 14, further comprising the step of retaining data that
13 include the job identification of a job in which a resource was not available in a time block to perform
14 a service required to do the job and an indication of said service and said time block.

15 17. (Original) The method of Claim 14, wherein the step of retaining the data is completed
16 substantially before the step of enabling an appointment to be made.

17 18. (Original) The method of Claim 14, wherein the step of enabling the appointments to be
18 made is carried out by communicating over a network link with a site at which the data are
19 maintained.

20 19. (Original) The method of Claim 18, wherein the network link comprises an Internet
21 connection between the site where the data are maintained, and client computing devices used to
22 input the specific time criteria, further comprising the step of associating a customer identification
23 with a job identification, for each appointment that is made.

24 20. (Original) The method of Claim 14, wherein a plurality of services are completed
25 sequentially to do a job, and wherein the step of automatically identifying the time blocks comprises
26 the step of identifying time blocks in which the plurality of services and the resources required for
27 carrying out the plurality of services sequentially are available.

28 21. (Original) The method of Claim 14, further comprising the step of identifying time
29 blocks in which specific resources are not available, so that said time blocks are therefore not
30 considered in the step of automatically identifying the time blocks.

22. (Original) The method of Claim 14, wherein a specific resource is available to perform
only a single task associated with the specific resource, during a time block.

23. (Original) The method of Claim 14, wherein a specific resource is available to perform
any task associated with the specific resource, during a time block that is not yet allocated to a job.

1 24. (Original) The method of Claim 14, wherein a job includes a service that can only be
2 done during a specific time block.

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4 25. (Original) The method of Claim 14, wherein a schedule path for a job associates a job
5 identification for said job with the resources that are available at a specific time and are needed to
6 perform the services required to do the job.

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8 26. (Original) The method of Claim 25, wherein schedule paths that include resources
9 having a lower priority are used in making an appointment to do a job before schedule paths that
10 include resources having a higher priority.

11 27. (Original) The method of Claim 25, further comprising the step of redefining the
12 schedule paths when an appointment is canceled, to use the resources that were in the schedule path
13 associated with the appointment that was canceled to define other schedule paths that are available to
14 be associated with another appointment.

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16 28. (Original) The method of Claim 21, wherein after an appointment is canceled, further
17 comprising the step of again identifying time blocks in which resources are not available, so that said
18 time blocks are therefore not considered in the step of automatically identifying the time blocks that
19 are available to create the schedule paths.

20 29. (Original) The method of Claim 14, further comprising the step of enabling maintenance
21 to be done on the data, said maintenance comprising at least one of:

- 22 (a) adding another job to the plurality of jobs;
23 (b) deleting an appointment;
24 (c) inserting a job among the plurality of jobs; and
25 (d) deleting a job from among the plurality of jobs.

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27 30. (Original) A machine-readable medium having processor-executable instructions for
28 performing the steps recited in Claim 14.

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1 31. (Original) A system for automating scheduling of a plurality of jobs, comprising:
2 (a) a memory in which data and machine instructions are stored;
3 (b) a user interface through which a user input is provided;
4 (c) a display;
5 (d) a processor that is coupled to the memory, the user interface, and the display,
6 said processor executing the machine instructions stored in the memory to carry out a plurality of
7 functions, including implementing a look-ahead procedure in which:
8 (i) a job identification is associated with each of the plurality of jobs;
9 (ii) all jobs that can be performed during a defined work period are
10 determined;
11 (iii) for each job that can be performed during the defined work period, each
12 time instance in which the job can be performed is determined;
13 (iv) each service required to perform each job is determined;
14 (v) resources that can carry out each service required to perform each job
15 are identified;
16 (vi) for each resource identified that can perform a service required to do
17 each job, time blocks in which the resource is available for the time required to perform the service
18 are determined, and the time blocks thus determined are associated with the job identification for the
19 job in which the service is required to form a plurality of schedule paths; and
20 (vii) data specifying all time blocks associated with each job identification,
21 and start times for each job within the time blocks are stored as data in the memory; and
22 (e) said processor subsequently executing the machine instructions stored in the
23 memory to enable appointments to be made to have desired jobs done, by searching the data stored in
24 the memory to locate specific time criteria for the desired jobs, said data being modified in response
25 to each appointment that is made, to identify time blocks that are no longer available for doing a job.

26 32. (Original) The system of Claim 31, wherein the user interface is employed to indicate a
27 desired job and the specific time criteria for the desired job.

28 33. (Original) The system of Claim 31, further comprising a network interface that is
29 connected in data communication with the processor, said network interface coupling the processor
30 with a remote site for selection of a desired job and for selection of a specified time criteria to
31 perform the job.

32 34. (Original) The system of Claim 31, wherein the look-ahead procedure further provided
33 for ranking the time blocks associated with each job in the data, to achieve one of:

34 (a) a ranked priority in the use of resources; and
35 (b) a balancing of the resources that are used for the services required to do the
36 jobs.

1 35. (Original) The system of Claim 31, wherein data are stored in memory that include an
2 indication of the job identification of a job in which a resource was not available in a time block to
3 perform a service required to do the job, and an indication of said service and said time block.

4 36. (Original) The system of Claim 31, wherein the look-ahead procedure is carried out
5 before any appointment is made.

6 37. (Original) The system of Claim 33, wherein the network interface couples the processor
7 in communication via the Internet to the remote site where the data are maintained, and a customer
8 identification for a user at a remote site is associated with a job identification for each appointment
9 that is made.

10 38. (Original) The system of Claim 31, wherein a plurality of services are completed
11 sequentially to do a job, and wherein time blocks in which the plurality of services and the resources
12 required for carrying out the plurality of services sequentially are available, are identified by the
13 processor in the look-ahead procedure.

14 39. (Original) The system of Claim 31, wherein time blocks in which specific resources are
15 not available are identified in the look-ahead procedure, so that said time blocks are excluded when
16 identifying the time blocks used in the plurality of schedule paths.

17 40. (Original) The system of Claim 31, wherein a specific resource is only available to
18 perform a specific task during a specific time block.

19 41. (Original) The system of Claim 31, wherein a specific resource is available to perform
20 any task associated with the specific resource during a time block.

21 42. (Original) The system of Claim 31, wherein a job includes a plurality of services that are
22 able to be performed concurrently during at least a portion of a time block.

23 43. (Original) The system of Claim 31, wherein a schedule path for a job associates a job
24 identification for said job with the resources that are available at a specific time and are needed to
25 perform the services required to do the job.

26 44. (Original) The system of Claim 31, wherein resources have different priorities, and
27 wherein schedule paths that include resources having a lower priority are used in making an
28 appointment to do a job before schedule paths that include resources having a higher priority.

29 45. (Original) The system of Claim 31, the machine instructions cause the processor to
30 redefine the schedule paths when an appointment is canceled, so that the resources that were in the
schedule path associated with the appointment that was canceled are then used to define other
schedule paths that can be employed in another appointment.

 46. (Original) The system of Claim 31, wherein after an appointment is canceled, time
blocks in which resources are not available are again identified by the processor, so that said time
blocks are therefore excluded when the processor identifies the time blocks that are available to
create the schedule paths.

1 47. (Original) The system of Claim 31, wherein the machine instructions also cause the
2 processor to enable maintenance to be done on the data stored in the memory, said maintenance
3 comprising at least one of:

- 4 (a) adding another job to the plurality of jobs;
 - 5 (b) deleting an appointment;
 - 6 (c) inserting a job among the plurality of jobs; and
 - 7 (d) deleting a job from among the plurality of jobs.
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